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241971 (MICROPART? OR MICROENCAPSUL? OR MICROSPHERE# OR MICROCAPSULE# OR NANOCAPSULE# OR NANOPART? OR NANOSPHERE#)

=> s l1 and starch

25259 L1 AND STARCH

=> s 12 and (amylopectin content)

22 L2 AND (AMYLOPECTIN CONTENT)

=> s 13 and (amino acid nitrogen)

2 FILES SEARCHED...

11 L3 AND (AMINO ACID NITROGEN)

=> d l4 1-11 ibib abs

ANSWER 1 OF 11 USPATFULL on STN

ACCESSION NUMBER:

2004:151060 USPATFULL

TITLE:

Microparticles

INVENTOR(S):

Gustavsson, Nils Ove, Loddekopinge, SWEDEN

Jonsson, Monica, Bara, SWEDEN

Laakso, Timo, Campton, UNITED KINGDOM

Reslow, Mats, Lund, SWEDEN

NUMBER	KIND	DATE
US 2004115281	A1	20040617

PATENT INFORMATION: APPLICATION INFO.:

RELATED APPLN. INFO.:

US 2003-705204 20031110 (10) **A**1 Continuation of Ser. No. US 2001-970793, filed on 5 Oct

2001, GRANTED, Pat. No. US 6706288

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE:

Richard H. Newman, Esq., Edwards & Angell, LLP, P.O.

Box 9169, Boston, MA, 02209

NUMBER OF CLAIMS:

46

EXEMPLARY CLAIM:

1

LINE COUNT:

1758

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A process for producing parenterally administrable microparticles, in which an at least 20% by weight aqueous solution of purified amylopectin-based starch of reduced molecular weight is prepared, the solution is combined with biologically active substance, an emulsion of starch droplets is formed in an outer phase of polymer solution, the starch droplets are made to gel, and the gelled starch particles are dried. A release-controlling shell is optionally also applied to the particles.

Microparticles which essentially consist of said

starch, have an amino acid content of less than 50 µg and have no covalent chemical cross-linking.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 2 OF 11 USPATFULL on STN

ACCESSION NUMBER: 2004:25172 USPATFULL

TITLE: Pharmaceutically acceptable starch

INVENTOR(S): Gustavsson, Nils Ove, Loddekopinge, SWEDEN

Jonsson, Monica, Bara, SWEDEN Berden, Per, Malmo, SWEDEN

Laakso, Timo, Bedfordshire, UNITED KINGDOM

JAGOTEC AG., Muttenz, SWITZERLAND (non-U.S. PATENT ASSIGNEE(S):

corporation)

NUMBER KIND DATE 

PATENT INFORMATION: US 2004019014 A1 20040129 APPLICATION INFO.: US 2003-627920 A1 20030728 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 2001-970648, filed on 5 Oct

2001, PENDING

NUMBER DATE-----

PRIORITY INFORMATION: SE 2000-3616 20001006

US 2001-260491P 20010108 (60)

DOCUMENT TYPE: Utility APPLICATION FILE SEGMENT:

LEGAL REPRESENTATIVE: BURNS DOANE SWECKER & MATHIS L L P, POST OFFICE BOX

1404, ALEXANDRIA, VA, 22313-1404

45 NUMBER OF CLAIMS: EXEMPLARY CLAIM: 1

LINE COUNT: 1167

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Production of purified, parenterally administrable starch by washing starch containing more than 85% amylopectin in order

to remove surface-localized proteins, lipids and endotoxins, dissolving the starch in aqueous medium, molecular weight reduction by

shearing, and optionally removal of residual water-soluble proteins,

preferably by anion exchange chromatography.

Purified starch and microparticles based on such starch.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 3 OF 11 USPATFULL on STN

ACCESSION NUMBER: 2003:299946 USPATFULL

TITLE: Microparticles

INVENTOR(S): Gustavsson, Nils Ove, Loddekopinge, SWEDEN

Jonsson, Monica, Bara, SWEDEN

Laakso, Timo, Campton, UNITED KINGDOM

Reslow, Mats, Lund, SWEDEN

Jagotec AG, Muttenz, SWITZERLAND (non-U.S. corporation) PATENT ASSIGNEE(S):

NUMBER KIND DATE \_\_\_\_\_\_ US 2003211167 A1 20031113 US 6692770 B2 20040217 US 2003-461445 A1 20030616 (10) PATENT INFORMATION:

APPLICATION INFO.:

RELATED APPLN. INFO.: Division of Ser. No. US 2001-970793, filed on 5 Oct

2001, PENDING

DATE NUMBER

SE 2000-3615 20001006 PRIORITY INFORMATION:

US 2001-260455P 20010108 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Benton S. Duffett Jr., BURNS, DOANE, SWECKER & MATHIS,

L.L.P., P.O. Box 1404, Alexandria, VA, 22313-1404

NUMBER OF CLAIMS: EXEMPLARY CLAIM: LINE COUNT: 1756

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A process for producing parenterally administrable microparticles, in which an at least 20% by weight aqueous solution of purified amylopectin-based starch of reduced molecular weight is prepared, the solution is combined with biologically active substance, an emulsion of starch droplets is formed in an outer phase of polymer solution, the starch droplets are made to gel, and the gelled starch particles are dried. A

release-controlling shell is optionally also applied to the particles.

Microparticles which essentially consist of said starch, have an amino acid content of less than 50 µg and have no covalent chemical cross-linking.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 4 OF 11 USPATFULL on STN

ACCESSION NUMBER: 2003:293948 USPATFULL

TITLE: Starch

INVENTOR(S): Gustavsson, Nils Ove, Loddekopinge, SWEDEN

Jonsson, Monica, Bara, SWEDEN Berdeh, Per, Malmo, SWEDEN

Laakso, Timo, Bedfordshire, UNITED KINGDOM

Reslow, Mats, Lund, SWEDEN

PATENT ASSIGNEE(S): Jagotec AG, Muttenz, SWITZERLAND (non-U.S. corporation)

NUMBER KIND DATE -----PATENT INFORMATION: US 2003206961 A1 20031106 US 2003-461393 A1 20030616 (10) APPLICATION INFO.:

RELATED APPLN. INFO.: Division of Ser. No. US 2001-970795, filed on 5 Oct

2001, GRANTED, Pat. No. US 6616948

NUMBER DATE -----SE 2000-3616 20001006 PRIORITY INFORMATION:

US 2001-260491P 20010108 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: BURNS, DOANE, SWECKER & MATHIS, L.L.P., P.O. Box 1404,

Alexandria, VA, 22313-1404

NUMBER OF CLAIMS: 45 EXEMPLARY CLAIM: 1 LINE COUNT: 1129

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Production of purified, parenterally administrable starch by washing starch containing more than 85% amylopectin in order to remove surface-localized proteins, lipids and endotoxins, subjecting the starch to a molecular weight reduction by acid hydrolysis, and optionally removing residual water-soluble proteins.

Purified starch and microparticles based on such starch.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 5 OF 11 USPATFULL on STN

ACCESSION NUMBER: 2003:257321 USPATFULL

TITLE:

Microparticles

INVENTOR(S):

Reslow, Mats, Lund, SWEDEN Jonsson, Monica, Bara, SWEDEN

Larsson, Karin, Torna Hallestad, SWEDEN Laakso, Timo, Campton, UNITED KINGDOM

NUMBER KIND  $\mathtt{DATE}$ -----US 2003180371 A1 20030925 US 2002-162674 A1 20020606 (10) PATENT INFORMATION: APPLICATION INFO.:

NUMBER DATE ----SE 2002-873 20020321 SE 2002-1599 20020530

PRIORITY INFORMATION:

Utility
APPLICATION DOCUMENT TYPE: FILE SEGMENT:

LEGAL REPRESENTATIVE: Benton S. Duffett, Jr., BURNS, DOANE, SWECKER & MATHIS,

L.L.P., P.O. Box 1404, Alexandria, VA, 22313-1404

NUMBER OF CLAIMS: EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 1 Drawing Page(s)

LINE COUNT: 1946

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A process for producing microparticles, in which an aqueous solution of purified amylopectin-based starch of reduced molecular weight is prepared, the solution is combined with biologically active substance, an emulsion of starch droplets is formed in an outer phase of polymer solution, the starch droplets are made to gel, the gelled starch particles are dried, and a release-controlling shell is optionally applied to the particles, wherein at least one buffer substance having the ability of keeping the pH of the produced microparticles above 3 if exposing the microparticles to an aqueous evironment is added at any stage during the process.

Microparticles which essentially consist of said starch, have an amino acid content of less than 50  $\mu g$  and have no covalent chemical cross-linking and which have the aktivity of keeping the pH above 3 if exposed to a aqueous environment,

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 6 OF 11 USPATFULL on STN T.4

ACCESSION NUMBER:

2002:191248 USPATFULL

TITLE:

Microparticle preparation

INVENTOR(S):

Gustavsson, Nils Ove, Loddekopinge, SWEDEN

Jonsson, Monica, Bara, SWEDEN

Laakso, Timo, Campton, UNITED KINGDOM

Reslow, Mats, Lund, SWEDEN Bjorn, Soren, Lyngby, DENMARK Drustrup, Jorn, Farum, DENMARK

NUMBER KIND DATE -----PATENT INFORMATION: PATENT INFORMATION: US 2002102311 A1 20020801 APPLICATION INFO.: US 2002-970792 A1 20020110 (9)

> NUMBER DATE -----

PRIORITY INFORMATION: SE 2000-3614 20001006

US 2001-260495P 20010108 (60)

DOCUMENT TYPE:

Utility APPLICATION

FILE SEGMENT: APPLIC

LEGAL REPRESENTATIVE: Benton S. Duffett, Jr., BURNS, DOANE, SWECKER & MATHIS,

L.L.P., P.O. Box 1404, Alexandria, VA, 22313-1404

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

2 Drawing Page(s)

NUMBER OF DRAWINGS: LINE COUNT:

1903

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A parenterally administrable, biodegradable microparticle

preparation containing a biologically active substance which, during the

first 24 hours after injection, exhibits a release of the active

substance that is less than 25% of the total release, determined from a concentration-time curve in the form of the ratio between the area under the curve during the said first 24 hours and the total area under the

curve in question

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 7 OF 11 USPATFULL on STN

ACCESSION NUMBER:

2002:185295 USPATFULL Vaccine composition

INVENTOR(S):

TITLE:

Gustavsson, Nils Ove, Loddekopinge, SWEDEN

Jonsson, Monica, Bara, SWEDEN

Laakso, Timo, Campton, UNITED KINGDOM

Reslow, Mats, Lund, SWEDEN

Larsson, Karin, Torna Hallestad, SWEDEN

NUMBER KIND DATE

----US 2002098203 A1 20020725
US 2002-970794 A1 20020110 (9)

PATENT INFORMATION:

APPLICATION INFO.:

NUMBER DATE

PRIORITY INFORMATION: SE 2000-3615 20001006

US 2001-260455P 20010108 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Benton S. Duffett, Jr., BURNS, DOANE, SWECKER & MATHIS,

L.L.P., P.O. Box 1404, Alexandria, VA, 22313-1404

NUMBER OF CLAIMS: 5: EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 2 Drawing Page(s)

LINE COUNT: 1639

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A vaccine composition which comprises an immnunologically active substance embedded in **microparticles** essentially consisting of

starch having an amylopectin content

exceeding 85% by weight, of which at least 80% by weight has an average molecular weight within the range of 10-10000 kDa, and without any covalent chemical cross-linking between the **starch** molecules.

A process for preparing such vaccine composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 8 OF 11 USPATFULL on STN

ACCESSION NUMBER: 2002:1

2002:156739 USPATFULL

TITLE:

Parenterally administrable microparticles

INVENTOR(S): Jonsson, Monica, Bara, SWEDEN

Laakso, Timo, Campton, UNITED KINGDOM

Reslow, Mats, Lund, SWEDEN

·· —	
PATENT INFORMATION: US 2002081336 A1 20020627 APPLICATION INFO.: US 2001-970649 A1 20011005 (	9)

US 2001-260496P 20010108 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Benton S. Duffett, Jr., BURNS, DOANE, SWECKER & MATHIS,

L.L.P., P.O. Box 1404, Alexandria, VA, 22313-1404

NUMBER OF CLAIMS: 57 EXEMPLARY CLAIM: 1

LINE COUNT: 1679

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for producing microparticles containing biologically active substance, in which process an aqueous solution of the said substance is prepared, this solution is mixed with an aqueous solution of PEG such that the substance is concentrated and/or solidified, the substance is optionally washed, the substance is mixed with an aqueous starch solution, the composition obtained is mixed, after the admixture of the starch solution, with a polymer solution, thereby forming an emulsion of starch droplets in the polymer solution, the starch droplets are solidified into microparticles, the microparticles are dried and a release-controlling shell is optionally applied to these.

Novel microparticles which are obtainable by means of this process.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 9 OF 11 USPATFULL on STN

ACCESSION NUMBER: 2002:126893 USPATFULL

TITLE: Starch

INVENTOR(S): Gustavsson, Nils Ove, Loddekopinge, SWEDEN

Jonsson, Monica, Bara, SWEDEN Berden, Per, Malmo, SWEDEN

Laakso, Timo, Campton, UNITED KINGDOM

Reslow, Mats, Lund, SWEDEN

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002065411	A1	20020530	
	US 6616948	B2	20030909	
APPLICATION INFO.:	US 2001-970795	A1	20011005	(9)
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PRIORITY	INFORMATION:	SE 2000-3616 20	0001006
		US 2001-260491P 20	0010108 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Benton S. Duffett, Jr., BURNS, DOANE, SWECKER & MATHIS,

L.L.P., P.O. Box 1404, Alexandria, VA, 22313-1404

NUMBER OF CLAIMS: 45

EXEMPLARY CLAIM: 1 LINE COUNT: 1127

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Production of purified, parenterally administrable starch by

washing starch containing more than 85% amylopectin in order to remove surface-localized proteins, lipids and endotoxins, subjecting the starch to a molecular weight reduction by acid hydrolysis, and optionally removing residual water-soluble proteins.

Purified starch and microparticles based on such starch.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 10 OF 11 USPATFULL on STN

ACCESSION NUMBER:

2002:85699 USPATFULL

TITLE:

Pharmaceutically acceptable starch

INVENTOR(S):

Gustavsson, Nils Ove, Loddekopinge, SWEDEN

Jonsson, Monica, Bara, SWEDEN Berden, Per, Malmo, SWEDEN

Laakso, Timo, Campton, UNITED KINGDOM

Reslow, Mats, Lund, SWEDEN

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002045745	A1	20020418	
	US 6689389	B2	20040210	
APPLICATION INFO.:	US 2001-970648	A1	20011005	(9)

NUMBER DATE \_\_\_\_\_\_

PRIORITY INFORMATION:

SE 2000-3616 20001006

US 2001-260491P 20010108 (60)

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE:

Benton S. Duffett, Jr., BURNS, DOANE, SWECKER & MATHIS,

L.L.P., P.O. Box 1404, Alexandria, VA, 22313-1404

NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

LINE COUNT:

1167

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Production of purified, parenterally administrable starch by washing starch containing more than 85% amylopectin in order to remove surface-localized proteins, lipids and endotoxins, dissolving the starch in aqueous medium, molecular weight reduction by shearing, and optionally removal of residual water-soluble proteins, preferably by anion exchange chromatography.

Purified starch and microparticles based on such starch.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 11 OF 11 USPATFULL on STN L4

ACCESSION NUMBER:

2002:84936 USPATFULL

TITLE:

Microparticles

INVENTOR(S):

Gustavsson, Nils Ove, Loddekopinge, SWEDEN

Jonsson, Monica, Bara, SWEDEN

Laakso, Timo, Campton, UNITED KINGDOM

Reslow, Mats, Lund, SWEDEN

_	NUMBER	KIND	DATE	
•	S 2002044976	A1	20020418	
	S 6706288 S 2001-970793	B2 A1	20040316 20011005	(9)

NUMBER

DATE

SE 2000-3615 PRIORITY INFORMATION:

20001006

US 2001-260455P 20010108 (60)

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE:

Benton S. Duffett, Jr., BURNS, DOANE, SWECKER & MATHIS,

L.L.P., P.O. Box 1404, Alexandria, VA, 22313-1404

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

1

LINE COUNT:

1757

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A process for producing parenterally administrable

microparticles, in which an at least 20% by weight aqueous solution of purified amylopectin-based starch of reduced

molecular weight is prepared, the solution is combined with biologically active substance, an emulsion of starch droplets is formed in

an outer phase of polymer solution, the starch droplets are made to gel, and the gelled starch particles are dried. A

release-controlling shell is optionally also applied to the particles.

Microparticles which essentially consist of said starch, have an amino acid content of less than 50 µg and have no covalent chemical cross-linking.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.